What is claimed is:

1. A hydraulically controlled fan drive system comprising:

a housing assembly containing a hydraulic fluid; and

an engaging circuit coupled to said housing assembly and comprising;

a first pitot tube coupled within said housing assembly and receiving at least a portion of said hydraulic fluid;

said engaging circuit engaging said housing assembly to a fan shaft in response to supply of said hydraulic fluid from said first pitot tube.

2. A system as in claim 1 wherein said engaging circuit comprises:

a clutch plate assembly coupled to said housing assembly and to a fan shaft and having at least one clutch plate; and

a piston applying pressure on said at least one clutch plate to engage said housing assembly to said fan shaft.

3. A system as in claim 2 wherein said clutch plate assembly comprises a drum housing said at least one clutch plate, said drum housing having at least one slot between a fluid reservoir of said housing assembly and a drum chamber, said at least one slot directly cooling said at least one clutch plate.

4. A system as in claim 1 wherein said housing assembly comprises cooling fins that perform as a heat exchanger.

5. A system as in claim 1 wherein said first pitot tube is coupled within a piston housing.

6. A system as in claim 1 wherein said first pitot tube supplies said hydraulic fluid to apply pressure on a piston in turn engaging said fan shaft.

7. A system as in claim 6 wherein said piston applies direct pressure on at least one clutch plate and engages said fan shaft to said housing assembly.

8. A system as in claim 6 wherein said piston comprises:

a pressure side with a pressure pocket; and

a drive side with a drive pocket.

9. A system as in claim 1 further comprising a return assembly coupled to said engaging circuit and said fan shaft and returning said engaging circuit to a disengaged state.

10. A system as in claim 1 wherein said housing assembly comprises:

a body member; and

a cover member coupled to said body member .

11. A system as in claim 1 further comprising a hydraulic fluid flow controller coupled to said first pitot tube and controlling fluid pressure to said engaging circuit.

12. A system as in claim 11 wherein said hydraulic fluid flow controller electronically, mechanically, or both electronically and mechanically adjusts fluid pressure to said engaging circuit.

13. A system as in claim 11 wherein said hydraulic fluid flow controller is selected from at least one of a solenoid, bimetal coil device, and a valve.

14. A system as in claim 11 wherein said hydraulic fluid flow controller when not receiving power is in a closed state.

15. A system as in claim 11 wherein the system is defaulted to an engaged state when said hydraulic flow controller is in said closed state by increase in fluid pressure to said engaging circuit.

16. A system as in claim 11 further comprising a main controller coupled to said hydraulic fluid flow controller and engaging the system to derate a vehicle engine.

17. A system as in claim 11, further comprising a main controller coupled to said hydraulic fluid flow controller and generating a cooling signal, said hydraulic fluid flow controller adjusting fluid flow pressure in response to said cooling signal.

18. A system as in claim 1 further comprising variable cooling circuit, said circuit comprising a second pitot tube coupled within said housing assembly and supplying said hydraulic fluid to and cooling said engaging circuit.

19. A system as in claim 1 further comprising a fluid distribution block rigidly mounted to a fixed bracket having at least one fluid passageway for hydraulic fluid pressure adjustment to said engaging circuit.

20. A system as in claim 19 wherein said fluid distribution block comprises a hydraulic fluid flow controller controlling passage of hydraulic fluid through said first pitot tube and said at least one fluid passageway.

21. A system as in claim 1 wherein said housing assembly comprises a relatively hot side and a relatively cool side, said first pitot tube receiving said hydraulic fluid from said relatively cool side.

22. A system as in claim 1 further comprising a temperature sensitive device preventing flow of fluid within said first pitot tube.

23. A system as in claim 1 further comprising a pressure relief valve relieving pressure within said first pitot tube.

24. A method of engaging a hydraulically controlled fan drive system comprising:

containing a hydraulic fluid within housing assembly;

receiving at least a portion of said hydraulic fluid via a pitot tube; and

engaging said housing assembly to said fan shaft in response to supply of said hydraulic fluid from said first pitot tube.

25. A method of cooling an engaging circuit of a hydraulically controlled fan drive system comprising:

containing a hydraulic fluid within housing assembly;

receiving at least a portion of said hydraulic fluid via a pitot tube; and

circulating fluid through the engaging circuit in response to said received hydraulic fluid.

26. A method as in claim 25 wherein circulating fluid through the engaging circuit comprises:

channeling said hydraulic fluid through a piston housing into a fan shaft chamber;

directing said hydraulic fluid through said fan shaft chamber into and through a clutch pack; and

directing said hydraulic fluid through a return assembly.

27. A hydraulically controlled fan drive system comprising:

a housing assembly containing hydraulic fluid within a hydraulic fluid reservoir;

a piston assembly comprising;

a piston housing; and

a piston translating in response to applied hydraulic fluid pressure; and

an engaging circuit comprising;

a clutch plate assembly coupled to said housing assembly and to a fan shaft and having a plurality of clutch plates; and

a first pitot tube coupled within said housing assembly, contained within said hydraulic fluid reservoir, and supplying said hydraulic fluid to apply pressure on said piston and engage said clutch plates.